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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,679	10/27/2003	Tsutomu Sasaki	244300US-2 CONT	2055

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EXAMINER	
BRAUN, FRED L	

ART UNIT	PAPER NUMBER
2852	

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/692,679	SASAKI ET AL.	
	Examiner	Art Unit	
	Fred L. Braun	2852	

-- The MAILING DATE of this communication appears n the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-113* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,9-11,14-25,30-42 and 75-113* is/are allowed.

6)☒ Claim(s) *43,48,53,59,65,66,70 and 71* is/are rejected.

7)☒ Claim(s) *44-47,49-52,54-58,60-64,67-69 and 72-74* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/892,656.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/27/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The title of the invention fails to reflect the fact that a method is being claimed.

2. The abstract of the disclosure is objected to because the abstract fails to clearly set forth that applicants' contribution to the art to which the invention pertains is a method. Correction is required. See MPEP § 608.01(b).

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract

on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. Claims 2-8, 12, 13 and 26-29 are objected to under 37 CFR 1.75(a) because they fail to particularly point out and distinctly claim the invention. More specifically, these claims are dependent upon base method claims 1 or 22, respectively, while line 1 of claims 2, 7, 12, 26 and 27, respectively, recite "The device" which implies that an apparatus rather than a method is being claimed in said last-mentioned claims and any claims dependent thereon. Correction is required.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the

subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 43 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al ('930) or Iino et al in view of the Japanese publication by Ishizuka et al ('773).

All of the claimed method steps are disclosed and/or suggested to one having ordinary skill in the art by Figure 22 of Tsukamoto et al ('930) and/or Figure 2 of Iino et al, respectively, and the detailed description of said Figures set forth in said disclosures except for the use of an agitator means in the liquid storage tank which is offset about an axis of rotation from the center of a cross-section of said storage tank. More specifically, with respect to the patent to Tsukamoto et al ('930), element 2 (Fig. 22) of same is the claimed latent image carrier, element 21 (Fig. 22) the liquid storing section, element 22a (Fig. 22) the developer carrier for depositing the developing liquid from the liquid storing section to the latent image carrier, and element 72 (Fig. 22) is the churning or agitating means for churning or agitating the liquid in the liquid storing section to thereby inherently swirl the liquid in a horizontal direction in said liquid storing section. As to the patent to Iino et al, element 1 (Fig. 2) is the claimed latent image carrier element 23 (Fig. 2) the liquid storing section, and element 202 (Fig. 3) the developer

carrier for depositing the developing liquid from the liquid storing section to the latent image carrier.

It is submitted that the Japanese publication by Ishizuka et al ('773) shows that it is well known in the art to position a dispersing or agitator means 55 (Fig. 2) in the liquid storage tank 5F (Fig. 1) which is offset about an axis of rotation from the center of a cross-section of said storage tank to properly disperse or diffuse the liquid developer in said storage tank. It is further submitted that element 55 (Fig. 2) of the Japanese publication by Ishizuka et al ('773) will not impede the proper dispersion or mixing of the toner particles and the carrier liquid in said storage tank. Moreover, the Japanese publication by Ishizuka et al ('773) shows that it is well known in the art to position a dispersing or agitator means 58 (Fig. 2) in the liquid storage tank 5F (Fig. 1) which is offset about an axis of rotation from the center of a cross-section of said storage tank.

Therefore, to provide the liquid storage tank of Tsukamoto et al ('930) and/or Iino et al with an agitator means which is rotatable about an axis offset from the center of a cross-section of said storage tank in order to properly disperse or diffuse the liquid developer in the storage tank, as suggested by the Japanese publication by Ishizuka et al ('773), would be an obvious modification of the prior art to one having ordinary skill in the art at the time applicants invention was made.

10. Claims 53 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al ('930) or Iino et al in view of the Japanese publication by Kimura.

The disclosures of the patents to Tsukamoto et al ('930) and Iino et al, noted supra, are incorporated herein in their entirety by reference thereto.

The Japanese publication by Kimura shows that it is well known in the art to use a flexible agitator means 7 (Fig. 3) which not only stirs the liquid in the storage tank but also wipes the side of the storage tank.

Therefore, to provide the liquid storage tank of Tsukamoto et al ('930) and/or Iino et al with a flexible agitator means for stirring the liquid in the storage tank and to wipe the side of said storage tank, as suggested by the Japanese publication by Kimura, would be an obvious modification of the prior art to one having ordinary skill in the art at the time applicants invention was made.

11. Claims 65, 66, 70 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al ('930) or Iino et al in view of Hunstiger.

The disclosures of the patents to Tsukamoto et al ('930) and Iino et al, noted supra, are incorporated herein in their entirety by reference thereto.

It is submitted that the patent to Hunstiger shows that it is well known in the art to provide an agitator means 52 (Fig. 2) with a plurality of blades along the shaft 53 (Fig. 1) of same so that the liquid in storage tank 48 (Fig. 1) flows along an axis of rotation of said agitating means. It is further submitted that it is obvious to one having ordinary skill in the art that the developing liquid in the liquid storing section 12 (Fig. 1) of Hunstiger would inherently swirl or be agitated in a vertical direction along the shaft if said agitating means were oriented in a vertical orientation rather than a horizontal orientation.

Therefore, to provide the liquid storage tank of Tsukamoto et al ('930) and/or Iino et al with an agitator means having a plurality of blades along the shaft thereof so that the liquid in said storage tank flows along an axis of rotation of said agitation means, as suggest by Hunstiger, would be an obvious modification of the prior art to one having ordinary skill in the art at the time applicants invention was made.

12. Claims 44-47, 49-52, 54-58, 60-64, 67-69, 72, 73 and 74 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claims 2-8, 12, 13 and 26-29 would be allowable if the objection thereto, noted supra, were obviated.

14. The remaining list of patents cited on the attached form PTO-892 are cited of interest because they were cited by applicants in the Information Disclosure Statements they submitted in parent application Serial No. 09/892,656, filed on June 28, 2001, now US Patent No. 6,694,112.

15. Any inquiry concerning this communication should be directed to Fred L Braun at telephone number (571) 272-2132.

Fred L Braun

FRED L. BRAUN
PRIMARY EXAMINER
ART UNIT 2852